VACTRAK
Interface Project Stages

This document describes in detail the various stages involved when developing an interface with VacTrAK.

Discovery – At this stage the project is proposed but details are needed by all parties before deciding to move forward.

    1.1. The organization completes VacTrAK's Provider Electronic Data Exchange Readiness Checklist to discern the organization's readiness to move forward.

        1.1.1. After completion of this checklist, if the organization assesses that it is ready, then continue to step 1.2.

        1.1.2. If the organization accesses that it is not yet ready to continue, VacTrAK encourages the organization to discuss issues or barriers with VacTrAK staff and contact EHR vendor as necessary. Together, a readiness action plan can be developed.

    1.2. After self-accessing it is ready to move forward, the organization completes VacTrAK Provider Application. (Unless an active application is on file with VacTrAK. These are completed annually. If unsure, VacTrAK staff can help determine the application's status.)

    1.3. VacTrAK staff then:

        1.3.1. Evaluates the completed VacTrAK Practice Application.

        1.3.2. Contacts organization to discuss moving the project forward to the Planning stage, including: discussing the readiness checklist and the need for a kick-off call and EHR demonstration.

        1.3.3. Provides the organization with a copy of the Interface Project Stages if that has not been done previously.

2. **Planning** – In this stage information is gathered to determine the interface's individual configuration needs and any modifications required in the EHR, in the organization's business practice, or with staff workflow or training. Information gathered during the Planning stage is documented and used during future stages.

    2.1. First the kick-off call is held:

        2.1.1. Kick-off call participants include VacTrAK support staff and staff from the organization who can answer questions related to the EHR and its everyday use. Typically, this include at least one clinical and one technical staff from the organization. The EHR vendor is typically not included in this call. However, they can be included at the organization's discretion.

        2.1.2. During this call the VacTrAK Project Profile is filled out and VacTrAK related education is provided.

            2.1.2.1. This profile is used by VacTrAK as a tool to track details such as the organization's special interface configuration or training needs.

            2.1.2.2. Any issues or opportunities identified during the kick-off call are also documented on this form.

            2.1.2.3. This profile can be started by the organization's staff prior to the kick-off call if so desired. In addition to speeding up the call, it can assist organization understanding of the type of information discussed on the call and help to ensure correct staff is present for the call.

            2.1.2.4. This document will be modified throughout the forthcoming stages as needed.

    2.2. After the kick-off call the organization provides VacTrAK with the immunization related standard codes used by the organization's EHR. (If appropriate this can come from their EHR vendor.)

        2.2.1. The codes are reviewed by VacTrAK staff for completeness, accuracy, and compatibility.

        2.2.2. Codes reviewed include but not limited to CVX and MVX codes, and administration route and site codes.

        2.2.3. Findings from this review are shared with the organization and added to the project profile (as applicable).

    2.3. After the kick off call and code set review, a demonstration by organization staff showing how they use their EHR is held using a remote meeting tool such as GoToMeeting. (The kick-off call and demonstration can be combined if that better meets the needs of the parties involved.)

        2.3.1. The demonstration includes both demographic and vaccination data entry workflows. Specifically, the staff is asked to demonstrate how each of the following is documented in the EHR.

            2.3.1.1. How a patient is added or updated.

            2.3.1.2. How a guarantor and guarantor's relationship to patient is added or updated.

            2.3.1.3. How an administered vaccine is documented.

            2.3.1.4. How a historical vaccine is documented.

            2.3.1.5. Other areas of demonstration varies dependent upon previous findings or needs.

            2.3.1.6. If there is more than one method to enter/modify any of these, each method should be demonstrated.

        2.3.2. To best simulate everyday use of the EHR, the demonstration should be conducted with staff responsible for the day-to-day data entry.

2.3.2.1. In some cases, more than one person is needed for the demonstration because different data entry functions are often in separate modules in the EHR; and therefore, the data entry may normally be completed by different staff.

2.3.2.2. The EHR vendor is typically not needed at this stage, but they can be included at the discretion of the organization.

2.3.3. The demonstration should be used to clarify any existing ambiguities remaining after the kick-off call as documented on the project profile.

2.3.4. As necessary, the project profile is updated based on findings from the demonstration.

2.4. Before moving to stage 4, any additional questions remain from the project profile should be researched and documented.

3. **Development** - In this stage, initial interface configuration is completed on both sides based on information gathered during the Planning stage and modified as needed until "go live".

3.1. Because some of the required tasks are based on findings from previous stages, exact steps can vary.

3.1.1. VacTrAK set-up can include creating or modifying the organization/IRMS and facilities in VacTrAK and setting up/configuring the HL7 user and profile.

3.1.2. Organization specific set-up, changes, modifications will vary and depend heavily on findings from previous stages. This can include modifications to the interface, organization business processes, and/ or staff training, among others.

3.1.3. Some of these changes might require EHR vendor support. The scope of changes involving the EHR vendor can affect the project timeline. (For example: if the organization's current EHR version is not able to collect a VacTrAK required data element, the organization might need to upgrade to a version that does collect the required data.)

3.2. Before moving to stage 4, any known interface deficits, concerns, issues should be resolved.

4. **Testing** – During this stage connectivity, data quality, and interface testing are all completed.

4.1. Connectivity testing is intended to test the interface's ability to securely send HL7 messages to VacTrAK.

4.1.1. At this time, data quality is not the focus as the goal is simply ensuring a message can be securely delivered. (Note: please inform VacTrAK staff if your EHR can create, but cannot securely send HL7 messages, because we are aware of tools to help.)

4.1.2. After connectivity has been achieved and both sides indicate readiness, data should be allowed to pass from the EHR through the interface to VacTrAK's interface tool (called PHC Hub). At this stage the data is not allowed to pass from PHC Hub through to VacTrAK as data quality must still be evaluated.

4.2. Quality assurance testing follows connectivity testing and includes reviewing messages for completeness, accuracy, and timeliness. This step could reveal previously unknown interface, EHR, workflow, data entry or other issues needing additional attention.

4.2.1. At this time real patient data entered by typical users and generated from the organization's EHR begins to pass to PHC Hub. Caveats regarding the need for real patient data are required as experience has demonstrated that test data does not accurately assess readiness for go live.

4.2.2. Comprehensive reviews require 250 – 1000 records.

4.2.2.1. Under special circumstances, feedback can sometimes be provided on smaller datasets, but this does not replace comprehensive reviews and resources don't always permit this work process alteration. If there are concerns in this area, please discuss them with VacTrAK staff.

4.2.2.2. VacTrAK staff cannot review one message at a time as this has been demonstrated to be unproductive.

4.2.3. When enough messages have accumulated the messages are reviewed by VacTrAK staff and feedback is provided to the organization. It can be shared with vendors or other third parties at the organization's discretion.

4.2.4. Before moving to the next stage the interface must meet all VacTrAK requirements in accordance to the CDC Implementation Guide, VacTrAK Implementation Guide, state regulations and program policies.

4.2.4.1. A short list of VacTrAK Required Fields is also available, but this does not replace the comprehensive implementation guides.

4.2.4.2. On these documents, required (R) data elements are expected 100% of the time and conditionally required (C/R) data would be expected 100% of the time when the condition is met. Additional clarification regarding requirements are found in the aforementioned documents or from VacTrAK technical staff.

4.2.5. The testing process may cycle several times until the interface is properly configured and issues resolved.

4.3. Because the organization's interface is still not live in VacTrAK at this stage, organization staff should continue manual entry of immunizations into VacTrAK in accordance with state regulation. (ie. Double entry in EHR and VacTrAK is required to continue until go live – specifically through the end of stage 7.)

5. **Certification** – This stage assures the data received by VacTrAK accurately reflects what is in the organization's EHR.

   5.1. First VacTrAK selects 50 random patient records from the 1000 (or 250) successful messages and provides the associated data back to the organization for chart reviews.
   5.2. The organization compares this data to the organization's records through chart review. The organization then reports their findings to VacTrAK.
   5.3. Typically, the due diligence of the previous steps equates to a quick pass through the certification stage. However, if findings at certification warrant, the project might need to cycle back through some preceding stages to address previously unknown issues.
   5.4. Once both sides agree certification is complete, the project moves to the next stage.

6. **Prep for "Go Live!"** – At this stage final preparation is completed prior the interface's "go live" with VacTrAK.

   6.1. After certification is achieved, VacTrAK provides training to the organization's staff related to VacTrAK. This includes all general VacTrAK training required to meet needs of organization. Additionally, it includes specialized training related to HL7 messages and the interface, etc. including but not limited to Correct Lot Decrementing (CLD) training.
   6.2. The organization is provided with VacTrAK staff contact information to address any need post go live questions.
   6.3. The organization provides VacTrAK with contact information for the person(s) responsible for following up on VacTrAK error reports and other concerns or issues as they arise after go live. (This is the contact used by VacTrAK during stage 8.)
   6.4. If the organization is using VacTrAK to manage their vaccine inventory, then prior to the go live the organization's inventory in VacTrAK should be reconciled.
       6.4.1. This includes all sites receiving state supplied vaccines, but can also include those using only private vaccine stock if the organization uses VacTrAK to manage their private inventory.
       6.4.2. This is completed by whoever manages the organization's vaccine supplied inventory in VacTrAK.
   6.5. Any deficiencies in the interface and any resulting required interventions are discussed and agreed upon.
       6.5.1. For example: if a vaccine is deleted from the organization's EHR and interface can't send an HL7 message that includes the deleted vaccine designated as such, then the organization staff would be required to manually delete the corresponding information from VacTrAK to help ensure quality patient care.
       6.5.2. These requirements vary greatly dependent on EHR used by the organization and other factors.
       6.5.3. Reviewing these deficiencies and corresponding responsibilities happens at this time.

7. **Go Live!** – At the stage final changes to settings are made to allow data to pass to VacTrAK production.

   7.1. Settings and configurations are checked and any changes needed completed.
   7.2. The process is monitored closely for two weeks by all interested parties.
   7.3. The benefits of a legacy load are discussed and arrangements made as applicable.

8. **On-going QA and communication** – After the interface is live, the data quality commitment continues and lasts the lifetime of the interface.

   8.1. Error reports:
       8.1.1. Error reports are set up and explained by VacTrAK staff.
       8.1.2. These reports are delivered via email on a scheduled basis.
       8.1.3. The expectation is that errors be followed up on by appropriate organization staff. Specifically, all messages that err need to be fixed in the organization's EHR and re-submitted electronically. If that is not possible, they must be entered manually into VacTrAK in accordance with state regulation and program policy.
   8.2. The organization monitors their data in VacTrAK to ensure the IIS is receiving all expected data. VacTrAK staff can help provide tools for this monitoring as needed.
   8.3. As needed VacTrAK provides notices regarding planned system outages or other important information. The organization should have a plan to manage such outages, which includes a process for submitting to VacTrAK any data missed.
   8.4. VacTrAK periodically reviews organization for recertification.